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**In re ECHERD AND WATTERS****(CCPA)****176 USPQ 321****Decided Jan. 26, 1973****No. 8776****U.S. Court of Customs and Patent Appeals**

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**Headnotes****PATENTS****1. Claims — Functional — In general (§ 20.451)**

 There is nothing intrinsically wrong in defining something by what it does rather than by what it is; thus, flexibility, wet strength, and latent adhesive requirements recited in claims must be recognized as positive qualities of claimed product; while Patent Office may properly require proof that functional limitations being relied upon are not inherent characteristics of prior art, these potentially distinguishing features cannot be ignored.

**2. Board of Appeals — Procedure and practice (§ 19.45)**

Board's new reliance on reference constitutes new ground of rejection where new portions of reference are relied upon to support an entirely new theory and statutory basis for rejection appears to have been shifted from 35 U.S.C. 103 to section 102; applicants should be accorded opportunity to present rebuttal evidence as to new assumptions of inherent characteristics made by Board.

**Particular patents—Pipe Lagging**

Echard and Watters, Pipe Lagging Material and Process for Making Same, rejection of claims 12, 16, and 17 reversed.

**Case History and Disposition:**

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**Appeal from Board of Appeals of the Patent Office.**

Application for patent of James W. Echerd and Warren K. Watters, Serial No. 625,604, filed Mar. 24, 1967; Patent Office Group 160. From decision rejecting claims 12, 16, and 17, applicants appeal. Reversed.

**Attorneys:**

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S. WM. COCHRAN (FRED W. SHERLING of counsel) for Commissioner of Patents.

**Judge:**

Before MARKEY, Chief Judge, and RICH, ALMOND, BALDWIN, and LANE, Associate Judges.

**Opinion Text****Opinion By:**

MARKEY, Chief Judge.

This is an appeal from the decision of the Board of Appeals sustaining the rejection of claims 12, 16, and 17 of appellants' application for "Pipe Lagging Material and Process for Making Same," serial No. 625,604, filed March 24, 1967. Two references, Stafford <sup>1</sup> and Gouveia <sup>2</sup> are cited.

**The Invention**

The invention relates to a covering to be wrapped or "lagged" about the outside of insulation on a pipe to hold the insulation in place and thereby protect the contents of the pipe against thermal gain or loss. The characteristics of the material are set forth in claim 12:

12. A flame-resistant, drapable, pipe lagging material characterized by having sufficient flexibility and wet strength to permit the same to be wrapped when wet around insulated pipe surfaces and the like, and having sufficient adhesive characteristics to firmly bond itself to such surfaces upon subsequent drying, said pipe lagging material comprising a porous, woven, textile fabric base, having substantial flexibility in both wet and dry state, and a latent adhesive composition consisting essentially of an inorganic hydrophilic siliceous material

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impregnated in and firmly bonded to said fabric base and substantially inseparable therefrom through leaching-out in water and through flexure in dry condition, and having adhesive characteristics, when wet, to adhere the pipe lagging material to a surface around which it is wound and, when subsequently dried, to firmly bond and form with said fabric base an adherent, non-dusting covering on such surface.

The siliceous adhesive may be clay, such as bentonite or kaolin, or hydrous magnesium silicate. Claim 16 calls for an "asbestos-base" fabric as the base while claim 17 further limits said base to one containing "at least 50% by weight asbestos fibers."

### The Decision Below

The Stafford patent is directed to the manufacture of heat insulating blankets which retain structural strength, flexibility and handleability at temperatures up to 2000°F. The blankets consist of felted layers of mineral fibers, preferably asbestos, with 0.6%-3% by weight bentonite clay uniformly dispersed throughout as binder.

The Gouveia patent discloses an impregnating composition for asbestos materials in wo

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ven, non-woven, felt or other form designed to impart increased resistance or repellancy to fluid penetration without deleteriously affecting desirable properties such as flexibility. The components of the treating composition include bentonite clay, an alkali metal silicate, zinc oxide and a silicone water repellent.

The examiner rejected the claims as unpatentable over Stafford under 35 U.S.C. 103. In his Answer this rejection was modified to include reliance upon the previously merely listed Gouveia patent to show the equivalence of woven and non-woven asbestos fabrics as substrates for siliceous impregnants. Substitution of woven fabric for the "non-woven" blanket of Stafford thus being considered obvious, the asserted differences in properties such as structural integrity and wet strength over the Stafford product were dismissed as no more than the expected consequences of this replacement. Appellants had previously submitted evidence to distinguish the claimed product over Stafford in McCluer affidavit I with attached sample of a specially prepared Stafford product. This was now found wanting in that it failed to present any comparison with the "obvious" modification, i.e. *woven* asbestos containing similar amounts of bentonite. The opinion advanced by affiant, based on his experiments, that the small amount of bentonite employed by Stafford would not function as an adhesive in the manner contemplated by appellants was rejected on the view that "if it is true that appellants' bentonite is adhesive the same must also be inherently true of the bentonite binder in Stafford."

The board, although sustaining the rejection presented by the examiner, placed new emphasis on the Gouveia reference, stating:

While we agree with the examiner, for the reasons he has given, that it would have been obvious to one of ordinary skill in the art having the cited references before him to use a "woven" fabric in Stafford, we consider it abundantly evident, and a fact which cannot reasonably be ignored, that the claims before us present no differences in structure or composition over Gouveia alone, but differ therefrom only in expressing inherent properties or intended new

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uses of the old material.

On the question of latent adhesiveness of the bentonite component, it was held that "no convincing reason [has been given] to conclude that the compositions in the references, which read upon that of the claims, will not also possess this property."

A request for reconsideration was filed by appellants, accompanied by an affidavit of Echerd attempting to rebut the factual assumptions made by the board with respect to the Gouveia patent. The board refused, however, to consider "evidence which was not in the record when we rendered our decision."

### Opinion

Treating first the rejection presented to the board, we find the fundamental question is whether appellants' functional language places additional limitations on the claimed product. Must the properties of "sufficient flexibility and wet strength to permit the same to be wrapped when wet around insulated pipe surfaces and the like" and "sufficient adhesive characteristics to firmly bond itself to such surfaces upon subsequent drying" be given weight in considering the invention as a whole? The board's answer can only be interpreted as "no" in view of the statements:

[T]he positive limitations as to the base and applied composition appear met by the Stafford patent with the exception of the use of a "woven" fabric \* \* \*

and

The claims before us recite no proportions of the adhesive and thus present no compositional difference over the binder in Stafford.

We disagree.

[1] There is nothing intrinsically wrong in defining something by what it does rather than by what it is. In re Swinehart, 58 CCPA 1027, 1030, 439 F.2d 210, 212, 169 USPQ 226, 228 (1971); In re Fuetterer, 50 CCPA 1453, 319 F.2d 259, 138 USPQ 217 (1963). Here, the flexibility, wet strength and latent adhesive requirements recited in the claims must be recognized as positive qualities of appellants' product. While the Patent Office may properly require proof that the functional limitations being relied upon are not inherent characteristics of the prior art, Swinehart, 58 CCPA at 1031, 439 F.2d at 213, 169 USPQ at 229, these potentially distinguishing features cannot simply be ignored.

In the present case, we find that appellants not only have demonstrated the distinctiveness of the pipe lagging material so claimed over the Stafford product per se but also have effectively rebutted the obviousness of the modification later relied upon by the examiner. The sample prepared in connection with McCluer affidavit I shows the felted insulating blankets of Stafford to be quite friable and clearly lacking in the necessary structural integrity and wet strength properties of appellants' pipe lagging material. Affiant's opinion as to the absence of latent adhesive properties in this Stafford product is amply supported by the physical state of that sample. At the same time, modifications in the base and amount of bentonite as would be necessary to obtain a

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product having the claimed characteristics are contraindicated by the statements of McCluer, an expert in the field, that:

[S]tafford's requirement of withstanding exposure to temperatures up to 2000°F.

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by the mineral fibers \* \* \* precludes any suggestion of using asbestos of the chrysotile type, which is the only type satisfactorily usable for woven fabrics, since chrysotile asbestos fibers are subject to progressive embrittlement upon exposure to temperatures above about 900°F.—1500°F.;

and

[T]he results sought by Stafford could not be obtained by using bentonite in significantly larger amounts than those indicated in the patent since the density of such product would be far too great and it would be so inflexible as to be unable to serve the intended purpose; and further, because bentonite tends to vitrify and change to a ceramic at temperatures contemplated by Stafford (2000°F.) \* \* \*.

There being no suggestion for, but rather strong reasons against, the substitution of a woven asbestos base and the increase of bentonite in the Stafford insulating blankets, the examiner's rejection cannot stand.

[2] We find the new reliance by the board on Gouveia alone to be in effect a new ground of rejection. New portions of the reference are relied upon to support an entirely new theory and the statutory basis for rejection appears to have been shifted to 35 U.S.C. 102. Under such circumstances, appellants should have been accorded an opportunity to present rebuttal evidence as to the new assumptions of inherent characteristics made by the board. *In re Bulina*, 53 CCPA 1275, 362 F.2d 555, 150 USPQ 110 (1966).

The decision of the board is *reversed* with respect to the § 103 rejection and the case is *remanded* for further proceedings, not inconsistent herewith, in relation to the new rejection.

### Footnotes

Footnote 1. U. S. Patent 2,554,963, issued May 29, 1951.

Footnote 2. U. S. Patent 3,009,829, issued November 21, 1961.

- End of Case -

